The Impact of Explicit Knowledge of Grammar on Iranian EFL Learners’ Listening Comprehension Performance

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Abstract: The aim of this study was to investigate the relationship between explicit knowledge of grammar and listening comprehension performance. The role of proficiency level in this process was also investigated. More specifically, it aimed at determining which group of explicit knowledge and proficiency level was better in using their knowledge in listening comprehension performance. To achieve the goal, 90 graduate and undergraduate students in Payame Noor University of Jahroom who were majoring in English participated in the study. The battery of test including placement test, grammaticality judgment test and listening comprehension test was used to gather the data. Analytic as well as descriptive analysis of the data was run to explore the relationship between these variables. First a set of correlation coefficients was computed to explore the relationship between explicit knowledge of grammar and listening comprehension performance. The results showed that there was a strong relationship between EFL learners’ explicit knowledge and listening comprehension performance. Then, the results of Standard Multiple Regression test demonstrated that there is a significant relationship between explicit knowledge of grammar and two groups (high and intermediate) of proficiency level in listening comprehension performance. The results suggest that learning explicit grammatical knowledge is necessary in EFL context and needs much more consideration.

Keywords: Explicit knowledge, implicit knowledge, grammar, proficiency, listening comprehension

Introduction

Listening is a basic skill in first language acquisition and is crucial in learning English as a second/foreign Language (ESL/EFL); however, inadequate consideration is allocated to the skill. These days on the basis of research studies and the opinion of different researchers such as Nunan (1998), listening is considered a very active component of language teaching and learning. However, careful observation of English classes reveals that listening skill is still the partly neglected aspect of language teaching. Traditionally, listening was considered as a
receptive skill which did not need instruction, but as Mendelsohn (1998) believes, listening is a complex process of interpretation and construction of meaning in the mind of the listener. In order to process the speech and construct the meaning, the listener undergoes both bottoms up and top down processing.

Listening can be divided into different types:

- Active listening: listening with a purpose (Barker, 1971).
- Empathic listening: listening to a person’s idea and understanding the speaker’s point of view.
- Listening for enjoyment: listen for pleasure.

Also Wolvin and Coakley (1991) categorize listening into the following types:

- Comprehensive listening: the listener comprehends the message in order to understand the meaning.
- Evaluative/Critical listening: listening to something and make judgments about it.
- Attentive listening: this is the kind of listening used in interviews, and meetings.

**Explicit knowledge:**

Linguistic knowledge has recently been discussed in terms of two types of knowledge, implicit and explicit knowledge of grammar. The distinction between implicit and explicit grammatical knowledge has been an interesting source of attention in the field of second or foreign language acquisition (SLA) for researchers (e.g. Ellis, 2004, 2005, 2006; Ellis et al, 2009; Philip, 2009).

Implicit knowledge is non-conscious and often involves step-by-step procedures, or specific feelings/emotions. On the other hand, explicit knowledge is a conscious process which can easily be verbalized. Explicit knowledge is conscious. Learners are aware of learning; as Ellis (2004) maintains, they also are aware of their knowledge and of what has happened, but in implicit learning, learners are unaware of learning. Explicit knowledge is declarative whereas implicit knowledge is procedural. Declarative knowledge is about facts, abstract rules and examples while procedural knowledge is automated. According to Ellis (1985) and Tarone (1988), implicit knowledge is highly systematic whereas explicit knowledge is imprecise, inaccurate and inconsistent.

Explicit learning is frequently assumed to be similar to the process which operates during conscious problem solving, and includes conscious attempts to have a representation of the task, search for related information and make hypothesis about the nature of the representation.
Relationship between explicit and implicit knowledge:

Different researchers like Hu (2002) and Ellis (2004, 2005) adopted an “interface” position on the role of implicit and explicit knowledge in L2 acquisition. **Non-interface position:** Implicit and explicit knowledge are acquired differently, being located and processed by different areas of the brain. Based on this view it is not possible for explicit knowledge to become implicit and also for implicit knowledge to become explicit. **Strong-interface position:** Explicit knowledge can become implicit by practice, by involving learners in communicative activities. **Weak-interface position:** Explicit knowledge can be converted into implicit knowledge, but under some conditions.

Significance of the study:

In spite of increasing popularity of the research on explicit knowledge and language skills, the nature of explicit knowledge in relation to listening comprehension is a new research area. The findings of this research can theoretically shed more light on methods of teaching and will practically have important pedagogical implications which introduce to the teachers more influential kinds of knowledge to improve their methods of teaching listening, and to the listeners to use the present study issues and improve their listening abilities to become more proficient listeners. So the results of this study will help both teachers and learners to become more familiar with different aspects of listening skill and also use these findings to enhance the quality of listening instruction and outcomes in classroom situations in Iran.

Research Questions:

Based on the objectives of the study, the following research questions are posed:

1. Does the learners’ level of explicit knowledge affect their listening comprehension performance?

2. Does explicit knowledge affect the learners’ listening comprehension performance differently across different proficiency levels?

Research Hypotheses

Based on the research questions of the study, the following hypotheses are posed:

H1: The learners’ level of explicit knowledge does not affect their listening comprehension performance.

H2: The level of explicit knowledge does not affect the learners’ listening comprehension performance differently across different proficiency levels.

Materials and Method:
Participants

90 male and female EFL learners in Payame Noor University of Jahrom, majoring in English language including the freshman, junior, senior and postgraduate students were the participants of this study. Of them 68 were female and 22 were male. Their age ranged from 19 to 30 with 13 as the mean starting age to learn English. On average, students had been studying English for 9 years. None of them had any experience of being in an English-speaking country. The rationale behind sampling the students from different educational levels (BA and MA) was to ensure that they had different L2 proficiency levels.

Instruments:

The battery of tests that was used to elicit data for the study is as follows:

(i) Cambridge University Placement test: This test was administered to measure the general language proficiency of the participants. The test consisted of 85 items including vocabulary, grammar, reading, and a cloze test. The interview and writing part of the test were omitted, because of time limitations. The reliability estimate for the placement test was 0.88 using Cronbach’s Alpha.

(ii) Untimed Grammaticality Judgment Test: it was delivered to measure the learners’ level of explicit knowledge. The test consisted of 10 sentences; the participants were required to identify and correct the error in an ungrammatical sentence and state the violated rule. The reliability of the test is 0.83 (Ellis, 2004).

(iii) Listening comprehension test which was a part of the placement test, it consisted of 13 questions in two parts. The first part contained a list of questions which asked the personal information about a woman who wanted to complete her insurance file, and the participants listened to an audio script and filled in the blank parts. The second part consisted of multiple choice items; the participants listened to a text, and then had to choose the picture which best matched the description. It is worth noting that the tests were administered in a fixed sequential order to all the participants.

Procedure

The placement test was administered to measure the learners’ proficiency level. The test consisted of 85 items which included vocabulary, grammar, reading, and a cloze test in three sections: (a) vocabulary with 25 items; (b) reading comprehension with 15 items; (c) structure 45 items (consisting of a cloze test with 20 items and sentence completion with 20 items). The interview and writing part of the test were omitted due to the time limitations. The reliability estimate for the placement test was 0.88, using Cronbach’s Alpha. The participants were classified into three groups based on their gained scores. The scores fewer than 40, 40 - 60, and
above 60 were chosen as the cut off points. According to the results of the test, the participants were divided into three groups of Low intermediate (Starter), Middle intermediate (Intermediate), High intermediate (Advanced) proficiency level.

With one week interval, an Untimed Grammaticality Judgment Test was administered. This is one of the frequently used tests in SLA as a measure of learners’ explicit knowledge. In this test, the participants were asked to decide whether a sentence is ill-formed or not, correct errors and state the violated rule. In GJT, time plays an important role in using the kind of knowledge participants relied on to answer the questions in this test. Ellis (2004) mentions that participants undergo a three step processing in performing GJT:

- Semantic processing-
- Noticing
- reflecting

The reliability of the test is 0.83 as measured in Ellis (2004) and 0.81 as measured in Ellis et al (2009). The test was delivered in the written form. It consisted of 10 sentences and the learners were asked to identify erroneous parts and correct them in an ungrammatical sentence. Due to the results of this test, the participants were divided into two groups of high and low level of explicit knowledge with 4.9 as its cutoff point. The reliability of the test was estimated through Cronbach’s Alpha, which was rather high, i.e. 0.80.

Finally, the listening comprehension test was administered with one week interval in order to measure the participants’ ability in listening. It consisted of 13 fill in the blank and multiple choice items. The participants listened to an audio script which asked personal questions about a client to complete his/her insurance document file. For multiple choice items, they listened to another audio script; they had to choose one picture that best matched the description.

The participants were divided into two groups of high and low level of explicit knowledge, based on their scores in the Grammaticality Judgment test. 4.9 was considered as the cutoff point. The results were then compared with the scores of the Listening Comprehension test. To find out whether there is any relationship between these two, a Pearson Product Moment Coefficients was used, and then a Stepwise Regression was used to find out whether there is any significant relationship between the mentioned variables.

In order to answer the second research question, the result of placement test was compared with the result of the Grammaticality Judgment test and Listening Comprehension test. The participants were classified into three groups of proficiency level based on their obtained scores in the placement test. The results were analyzed using Pearson Product Moment Coefficient and stepwise Regression to find the relationship between these variables. In order to present complete
information, descriptive analysis of the data, mean, frequency, percentage, and hierarchy tables are also presented.

It is worth mentioning that the participants were identified by a number that was supposed to be consistently used in all papers. The participants were not left alone; the researcher stood there, clarifying each one of the items.

**Results:**

According to the scores of the participants in Grammaticality Judgment test, the participants were divided into two groups of high and low level of explicit knowledge. The descriptive statistics of the two groups are shown in Table 1.

Table 1. Descriptive Statistics as to the two groups of explicit knowledge

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>1</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>62</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>100.0</td>
</tr>
</tbody>
</table>

As can be seen in this Table, the participants were divided into two groups of 1 and 2:

Group 1: scores of 0-4 which is considered as low level of explicit knowledge.

Group 2: scores of 5-10 which is considered as high level of explicit knowledge.

28 (31.11%) participants were in group 1 (low level of explicit knowledge), and 62 (69.89%) of them in group 2 (high level of explicit knowledge).

To answer the first research question of the study, the relationship between the participants' explicit knowledge of grammar (as was measured by Grammaticality Judgment test) and their listening comprehension performance (as measured by listening comprehension test) was investigated using Pearson Product Moment Coefficients. The correlation results are shown in Table 2.

Table 2. Correlation between explicit knowledge and listening comprehension
As shown in this Table, there is a significant relationship between explicit knowledge and listening comprehension. The correlation between explicit knowledge of grammar and listening comprehension is a significant one (0.000 falls below the 0.05). Based on these results, it can be concluded that the relationship is also a straight and strong one.

Table 3. Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.864a</td>
<td>.747</td>
<td>.744</td>
<td>1.401</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Explicit Knowledge

b. Dependent Variable: Listening

As observed in this Table, 74 per cent of the variance in participants’ listening comprehension performance is explained by explicit knowledge of grammar, so it is a respectable model which can predict the results.
To answer the second research question, Pearson Product Moment Coefficient was run to predict whether there is a relationship between the scores of explicit knowledge of grammar and listening comprehension across different proficiency groups. The following tables show the results of the correlation between these variables.

Table 3. Correlation between explicit knowledge and proficiency level (group 1) with listening test

<table>
<thead>
<tr>
<th>Proficiency Level Category</th>
<th>Listening</th>
<th>Explicit Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>25</td>
</tr>
</tbody>
</table>

As seen in this Table, the sig. (2-tailed) is 0.021. This means that the actual probability value was less than 0.005. This value is substantially smaller than our specific alpha of .05. Therefore, it can be concluded that there is a significant relationship between these two variables in the first group (high-level) of proficiency level.

Table 4. Correlation between explicit knowledge and proficiency level (group 2) with listening test

<table>
<thead>
<tr>
<th>Proficiency Level Category</th>
<th>Listening</th>
<th>Explicit Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pearson Correlation</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>34</td>
</tr>
</tbody>
</table>
As observed in this table, the correlation between the second group (intermediate) of proficiency level and the two variables is significant. Statistical justification for this fact is that the result of this correlation is 0.002; based on the p value of 0.05, the result of this correlation falls below 0.005.

Table 5. Correlation between explicit knowledge and proficiency level (group 3) with listening test

As seen in Table 5, the result of correlation between these variables and the third group of proficiency level is 0.696 which falls above the considered p value of 0.005. So it is quite revealing that this correlation is not significant.

As to the second research question which sought to find the ability of the two independent variables (explicit knowledge of grammar and proficiency levels) in listening comprehension performance as the dependent variable, a Standard Multiple Regression was run. Tables 6 and 7 show the results.
As observed in Table 6, considering the first group of proficiency level and groups of explicit knowledge as independent variables and listening comprehension as dependent variable, 17/8 per cent of the variance in participants’ performance in listening comprehension is explained by the model as a whole including both explicit knowledge and first group of proficiency level. It is also inferable from the table that, taking into account the second group of proficiency level and groups of explicit knowledge as independent variables and listening comprehension as dependent one, the two independent variables can predict 24/4 per cent of the participants’ performance in listening comprehension.

Table 7. Standard Multiple Regression

<table>
<thead>
<tr>
<th>Proficiency Level</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>2.560</td>
<td>.342</td>
<td>7.476</td>
</tr>
<tr>
<td></td>
<td>Explicit Knowledge</td>
<td>.369</td>
<td>.148</td>
<td>.460</td>
</tr>
<tr>
<td>2</td>
<td>(Constant)</td>
<td>4.209</td>
<td>.959</td>
<td>4.389</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Explicit

b. Dependent Variable: Listening
Table 7 reveals that the relationship between explicit knowledge and the first group of proficiency level (high) as independent variables with listening comprehension performance is significant. The reason which can be mentioned here is that the probability value of 0.021 is less than .005. This value is substantially smaller than our specific alpha of .05. Therefore, we can conclude that there is a significant relationship between these two independent variables and listening comprehension as the dependent variable. It is apparent from the same table that the relationship between explicit knowledge of grammar, the second group of proficiency level (intermediate) as independent variables and listening comprehension as dependent one is significant. This is because the sig. is 0.002 which falls below the considered p. value of 0.005.

Discussion:

Regarding the first research question which probes the relationship between EFL learners’ explicit grammatical knowledge and their listening comprehension performance, the findings of this study are in line with those of Mirzaie, et al. (2011). They studied a group of 160 graduate and undergraduate students who were majoring in English as a foreign language. He made use of timed and untimed grammaticality judgment test and EST TOEFL. The results show a nearly significant relationship between explicit grammatical knowledge and TOEFL sub-components. This means that, learners with a higher level of explicit knowledge performed better on the listening part of the test. This might be explained by the stronger role that explicit knowledge is playing in this study; the participants in the mentioned study were Iranian, where the only chance for exposure to English is in classroom situations with the main focus on grammar.

The findings of this study also support Ellis (2006) which found a relationship between explicit grammatical knowledge of EFL learners and TOEFL sub-components. That is, those participants with higher scores in explicit grammatical knowledge also performed better in listening comprehension test. There are also other research studies with the main focus on other language skills, i.e. reading and writing (Ercetin and Alptekin, 2011 and Macrory and Stone, 2000).

The results of the present study are somehow in connection with the study conducted by Ercetin and Alptekin (2011). This study was conducted on 51 Turkish university students as its
participants with the aim of exploring the relationship between L2 explicit knowledge and reading comprehension. They used a timed and untimed grammaticality judgment test, an elicited oral imitation test and a standardized reading comprehension test as the medium of the study. The results of analysis showed a significant positive relationship between explicit knowledge and reading comprehension.

Moreover, our results also support the findings of Macrory and Stone (2000) which was in the field of writing. They sought to find the relationship between knowledge of grammar and performance in writing. An informal interview and free production writing task measured the participants’ knowledge of prefect tense in French; they were British secondary school students. The results indicated a weak relationship between the participants’ knowledge of grammar and their use of tense in free written production.

The findings of this study are in contrast with those of Macaro and Martin (2006). A group of 22 L2 learners of French were the participants. An intervention group with 12 participants and a comparison group with 10 participants were studied to investigate if explicit grammar instruction makes all difference in production tasks of writing and translation. Grammaticality judgment test, a translation test, and a narrative composition test were used as the medium of the research. The results indicated that intensive grammar instruction was not significantly related to the participants’ production when compared to the comparison group. This means that explicit knowledge did not facilitate the writing performance of the participants. The intensive grammar instruction did not reduce the production of errors in production tasks (writing and translation) of the test.

Regarding the relationship between explicit knowledge of grammar and proficiency level in listening comprehension, the findings of this study is in agreement with Yoshida’s results (2009). The study was conducted to investigate whether there is a relationship between general L2 proficiency and explicit knowledge of grammar. Ten Japanese learners of English in a national university were the participants. Grammaticality Judgment test, proficiency test, and a translation test were used as the instruments of this research. The results indicated that the high proficiency subjects depend on their explicit knowledge to solve their problems in translation.

Also, the findings of this study is in accordance with Renou’s results (2001); he found a strong positive correlation between proficiency which includes listening, reading, vocabulary, grammar and structure with explicit knowledge of L2 French.

The results also support the findings of Roehr’s study (2008). He examined the relationship between explicit knowledge of L2 German and L2 proficiency. The knowledge of proficiency was examined as knowledge of grammar and vocabulary by means of fill in the blanks and multiple choice items. The meta-language test (explicit knowledge test) consisted of correction of errors and the participants had to provide explanations about the rules. A group of the first and
forth year advanced L2 German university students were the participants. These two tests were administered during the regular class time in two separate sessions. The language test was run; with one week interval, metalanguage test was administered. The results showed a positive strong correlation between these variables.

The findings of the present study are in contrast with Han and Ellis (1998) who studied a group of 48 adult learners of English. They made use of GJT's and production task to investigate if there is any relationship between explicit knowledge and general language proficiency. They didn’t find any significant relationship between meta-linguistic knowledge (explicit knowledge of grammar) and general language proficiency. This finding is also similar to the findings of Alderson et al (1997) who studied a group of undergraduate students. In their study, students with higher levels of explicit knowledge did not necessarily perform better on language proficiency test so they concluded that there is no relationship between explicit knowledge and language proficiency.

**Conclusion:**

The general outcomes of the study can be summarized as follows:

- There is a positive significant correlation between explicit knowledge of grammar and listening comprehension performance in both groups of high and low level of explicit knowledge.
- There is a positive significant correlation between explicit knowledge of grammar and listening comprehension performance in the group with high proficiency level.
- There is also a positive significant correlation between explicit knowledge of grammar and listening comprehension performance in the group of intermediate proficiency level.
- There is a correlation between explicit knowledge of grammar and listening comprehension performance in those with low level of proficiency, which is not analytically significant.

The findings of this study make several contributions to the current literature. First, Roehr (2008) who investigated the relationship between metalinguistic knowledge and language ability in university level L2 learners found significant correlations between proficiency level and metalinguistic knowledge. The results of this study confirm that of Roehr’s (2004, 2008) investigations.

Concerning the effectiveness of explicit knowledge of grammar based on the results, we should keep in mind that although the findings seem promising, results such as these should not be generalized to other groups without additional studies that examine larger numbers of L2 listeners. However, if these findings present a fairly accurate description of what might be observed from other populations, the L2 listening teachers and administrators would need to weight the possible benefits and practicality of such an approach to listening comprehension.
pedagogy for their specific teaching and learning context. Nevertheless, it seems safe to assume that L2 listening teachers who value improvement of their listening ability would welcome the results observed in this study despite some limitations occurring during this process.

**Limitations of the study:**

Though this study provides evidence indicating that explicit knowledge of grammar can improve listening comprehension ability, the reader should note its limitations and the ways in which future research might be enhanced. First, one main weakness of this study was the paucity of the participants. That is, this study was conducted with a small group of participants. Additional studies with larger groups of participants are needed to completely find out the effect of the knowledge.

Another noticeable limitation of this study lies in the fact that the participants were selected from a relatively small number of students taking part in university classes. It is advisable to choose the participants randomly from a large number of students in later studies. In short, the non-random and small number of participants is considered two main limitations of the study. In addition, the aim of the study was to investigate the impact of explicit knowledge of grammar, so it is better to perform a test of metalinguistic to make sure about the existence of explicit knowledge.

**Pedagogical implications:**

In spite of possible limitations of this study, the findings recommended various practical pedagogical implications. The findings of this study necessitate enough attention to explicit knowledge of grammar as a key element which helps EFL learners to obtain required fluency and accuracy for their performance in listening comprehension as a demanding skill. In order to make the students aware of knowledge of grammar, conscious instruction of explicit knowledge is strongly recommended. That is, the teachers should provide an opportunity for students to focus on form and grammar. And finally explicit knowledge of grammar is helpful not only in listening comprehension but also in other language skills, especially writing.

**Suggestions for further study**

This study was conducted on the basis of testing; other studies can be done on the basis of a period of instruction and then examination of the results. In this study, the participants were chosen from one university. Other researchers can extended their study to involve more candidates from different universities in order to compare the results and provide more logical explanation.
References:


